

CCR2 Interest Increasing After Potential \$803M Deal For Incyte

By Randall Osborne
Editor

"It's been a busy morning," said Markus Cappel, vice president of corporate and business development for **ChemoCentryx Inc.**, which found itself the target of phone queries last Monday as a result of the potential \$803 million research and licensing deal signed by **Incyte Corp.** with **Pfizer Inc.**

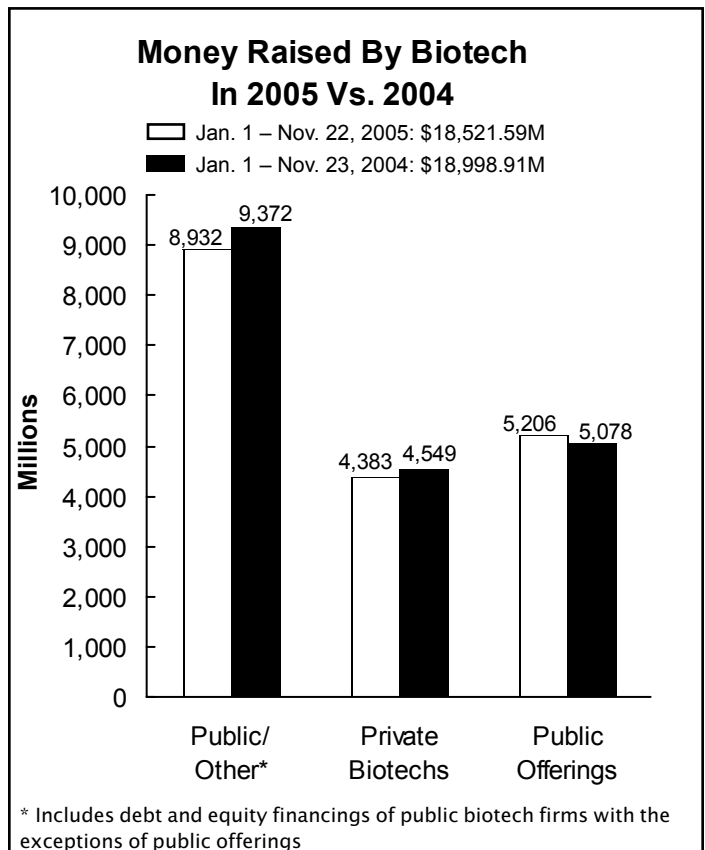
The afternoon probably was, too.

Pfizer is getting exclusive worldwide development and commercialization rights to Incyte's oral CCR2 antagonists. The program has yielded separate Phase IIa studies against rheumatoid arthritis and obesity in patients resistant to insulin. Excluded from the deal are preclinical CCR2 compounds against multiple sclerosis and another that is undisclosed, which will be advanced from the preclinical stage by Incyte.

Pfizer has agreed to provide research funds, paying \$40 million up front and buying \$20 million in convertible subordinated notes, with \$10 million issued within 20 days after the effective date of the deal and another \$10 million after Incyte files an investigational new drug application in one of the retained indications. The notes carry no interest and will be convertible into Incyte stock at premium. Milestone payments could mean as much as \$743 million more for Incyte.

"Players who lost out trying to negotiate with Incyte are looking at [others in] the space," Cappel told *BioWorld Financial Watch* – and those others include ChemoCentryx, which has an oral CCR2 antagonist not yet partnered that is expected to start Phase I trials by the end of this year.

Millennium Pharmaceuticals Inc. this summer



began a 110-patient Phase II trial with its CCR2 blocker, the monoclonal antibody known as MLN1202, in patients at risk for atherosclerotic cardiovascular disease (an area that Pfizer likely will go after, as well), and another Phase II trial with the compound in about 40 patients with relapsing-remitting MS.

Merck & Co. Inc. also has a CCR2 antagonist at the

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10 BIGGEST U.S. GAINERS FOR THE WEEK

(By Percent)		(By Dollars)	
Large Scale	38.46	Neurocrine Biosci	2.35
Ciphergen	35.16	Affymetrix	2.27
Palatin Tech	31.15	Cephalon	2.04
Immune Resp	26.32	Amylin	2.02
Incyte Genomics	25.00	Sepracor	1.90
Alliance	20.00	Crucell	1.76
Immunomedics	15.68	Adolor	1.74
Cerus Corp.	15.54	Aspreva	1.57
Antigenics	14.97	Momenta	1.48
Aspreva	13.74	Alnylam	1.39

10 BIGGEST U.S. LOSERS FOR THE WEEK

(By Percent)		(By Dollars)	
Praecis	-80.90	Alexion Pharma	-6.73
Alexion Pharma	-23.81	New River	-3.91
Viragen	-21.54	Praecis	-3.22
Hemispherx	-17.50	NitroMed	-2.06
Oxis Int'l	-13.79	Genzyme	-1.97
Pain Therapeu	-13.29	Immucor	-1.49
Access Pharma	-13.16	Invitrogen	-1.41
Draxis Health	-11.61	Rigel	-1.26
NitroMed	-11.38	Pain Therapeu	-1.12
Avant Immuno	-11.35	CoTherix	-1.03

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Phase II stage, said Steven Harr of Morgan Stanley, who called the Incyte deal with Pfizer a "clear positive" for the biotech firm, but added that "we need to have a better understanding of the market potential of these compounds and the economics for Incyte," such as the royalty rate, in order to determine the longer-term value.

Paul Friedman, president and CEO of Incyte, told investors during a conference call that he could not disclose royalties but deemed them "fully appropriate for the stage of the program and pretty favorable for Incyte."

Harr wrote in a research note that Pfizer "must have had an early look at the [RA] data expected this quarter, which bodes well for this indication," but whether investors will get a similar peek is uncertain. Friedman said the two firms "have not definitively decided where we're going to go with the respect to the Phase IIa studies" in RA, and Pfizer might decide not to disclose the results for competitive reasons. Data from the trials in obese patients could be made available in the first quarter of next year, Harr wrote.

Meanwhile, analysts at Morgan Stanley "expect the stock to trade up significantly," between \$7 and \$8, but shares will "be range-bound until there is better visibility on timelines for development." News of the Pfizer deal pushed Incyte's stock up \$1.06, or about 20 percent, to close at \$5.86 on Nov. 21.

In early 2004, Incyte morphed from a genomics firm into a drug development concern, shutting down its California facilities and cutting 57 percent of its work force (257 jobs), thus saving about \$50 million in annual operating expenses. From the CCR2 program came one of the company's first two internally developed candidates. The second is an oral sheddase inhibitor for solid tumors, INCB7839, which entered a Phase I study in April.

Sheddase is an enzymatic activity attributed to the ADAM family of proteins, shown to play a role in control-

ling the growth and spread of cancers regulated by epidermal growth factor receptor.

Much further along in the Incyte pipeline is Reverset, the oral, once-daily nucleoside analogue reverse transcriptase inhibitor licensed in September 2003 from **Pharmasset Ltd.**, which was spun out of Emory University in Atlanta. Incyte has full development, manufacturing and marketing rights in the U.S., Europe and other unnamed areas. Also called dexelvucitabine, or DFC, Reverset suffered a setback in September on word that the FDA wants a confirmatory Phase II study before the compound can move into Phase III trials.

CCR2 inhibitors, though, took center stage last week. After the Incyte/Pfizer news came word of ChemoCentryx's IND for its CCR2 inhibitor.

"I think the most promising indication [for compounds targeting CCR2], when we talk to members of our scientific advisory board, is certainly MS," Cappel said. RA looks like a good possibility, too, along with "surprisingly, Type II diabetes," he said. And, of course, there's atherosclerosis.

Cardiovascular indications demand large studies, and Cappel pointed out that Incyte "needed somebody [such as Pfizer] with a very strong primary care sales force and deep pockets to run those trials." Some CCR2 antagonists might be used with stents, he added.

ChemoCentryx also has done work with the CCRI receptor, and preclinical research netted the firm a licensing deal in March 2004 with **Forest Laboratories Inc.**, which agreed to provide funding for a joint research program for up to three years. CCRI has been validated in both preclinical and animal models of arthritis.

Next in line for a partnership could be ChemoCentryx's CCR2 program especially given the buzz created by Pfizer's deal with Incyte, which "got some pretty good financials," Cappel remarked. "I'd take \$40 million up front."

Whether his company will do that well or better might soon be known, as would-be Incyte suitors shop for other opportunities in CCR2.

"Stay tuned," he said.

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Biotech Collaborations And Other Actions In Agriculture And Animals: Nov. 23, 2004-Nov. 22, 2005

Biotech Co.* (Country; Symbol)	Agbiotech Partner/Institution	Type/Product Area	Terms/Details (Date)
AgraQuest Inc.*	U.S. Department of Agriculture	AgraQuest was awarded a Phase II Small Business Innovation Research grant for development of a biological fumigant	The two-year, \$296,000 grant will be used for a product based on the fungus Muscodor albus that is expected to have multiple applications in post-harvest and soil-borne diseases (1/4)
ArrayXpress Inc.*	North Carolina Biotechnology Center	The center awarded Array- Xpress a \$150,000 research loan	ArrayXpress will use the loan to develop a diagnostic test for a swine disease (3/8)
Arysta LifeScience Corp.* (Japan)	Bayer CropScience (unit of Bayer AG)	They entered agreements that expand existing collaboration	Arysta acquired amitraz (Mitac), an arari- cide and insecticide; got a license to mar- ket the fungicide fluoxastrobin in certain areas; and got a license to co-market deltamethrin, a pyrethroid insecticide, in the U.S. (4/27)
Athenix Corp.*	Iowa Corn Promotion Board	Research cooperation to explore opportunities of applying innovative technologies to corn	The board partnered with Athenix on the work under undisclosed terms (2/17)
Arcadia Biosciences Inc.*	National Institutes of Health	Arcadia received a grant to develop soybeans with desired levels of soy isoflavones	Arcadia will use its Tilling screening tech- nology in the effort; terms of the grant were not disclosed (10/31)
Arcadia Biosciences Inc.* and Washington State University	National Institutes of Health	Arcadia and WSU received a Small Business Technology Transfer grant related to research on wheat	They will research lines of wheat with reduced celiac disease-causing proteins (10/5)
Arcadia Biosciences Inc.*	Monsanto Co.	Monsanto licensed rights to use Arcadia's nitrogen use efficiency technology in canola	Arcadia is entitled to an up-front payment and potential milestone and royalty pay- ments in the deal; Monsanto gets global rights (9/20)
Chlorogen Inc.*	Dow AgroSciences LLC	They entered deals to use chloroplast transformation technology in Dow's animal health and agricultural biotechnology businesses	The technology is used for expressing for- eign genes in plant cells; one deal focuses on animal health vaccines; the other is on expressing Dow's traits in agricultural crops; terms were not disclosed (9/16)
Chromatin Inc.*	University of Illinois at Urbana-Champaign	They launched a program to accelerate development of mini-chromosome technology for the delivery of multiple traits in corn	The partnership leverages expertise in corn breeding and genetics at the university and Chromatin's mini-chromosome technology for improving characteristics in corn; terms were not disclosed (2/8)

Biotech Co.* (Country; Symbol)	Agbiotech Partner/Institution	Type/Product Area	Terms/Details (Date)
CompleGen Inc.*	DuPont Crop Protection	CompleGen will use its XenoGene system to discover the targets of active compounds identified by DuPont	XenoGene uses a reverse chemical geno- mics approach; it is the fourth deal between the companies; terms were not disclosed (5/11)
Cryptome Pharmaceuticals Ltd. (Australia; ASX:CRP)	Dairy Australia	Three-year deal on research to discover pharmaceuticals and nutraceuticals in milk proteins	Dairy Australia is supporting work at Cryp- tome to identify and characterize proteins and fragments of proteins with potential health benefits (11/9)
CytImmune Sciences Inc.*	Boehringer Ingelheim Animal Health (Germany)	BI licensed rights to use CytImmune's drug delivery technology for veterinary applications	The technology will be applied to develop- ment of tumor-targeted cancer drugs for the veterinary market; terms were not dis- closed (2/16)
Cytos Biotechnology AG (Switzerland; SWX:CYTN)	Pfizer Inc.	Pfizer entered an option agreement on two Cytos Immunodrug products for animal health applications	Pfizer also has first right to negotiate on other products for animal health; Cytos gets an up-front payment and potential milestone and royalty payments (1/6)
Evogene Ltd.* (Israel)	Faculty of Agriculture at Hebrew University (Israel)	Collaboration to jointly develop tomato varieties with improved taste and aroma	They will pool technologies and expertise in the effort, terms of which were not disclosed (5/24)
Exelixis Inc. (EXEL)	GenOptera LLC (joint venture of Exelixis and Bayer CropScience)	They are ending early a venture formed in 2000 to develop insecticides; Bayer is acquiring Exelixis' 40% stake in GenOptera	Bayer will have rights to resulting discover- ies in agriculture; Exelixis will have rights in all other fields; Exelixis will get an early ter- mination fee of about \$10.9M (4/1)
Genaissance Pharmaceuticals Inc. (GNSC)	Biotronics Ltd. (Cyprus)	Genaissance will provide high-throughput genotyping services to Biotronics	Biotronics is working under a government contract to establishing a breeding program in sheep that confers resistance to scrapie (8/23)
Genaissance Pharmaceuticals Inc. (GNSC)	Hellenic Ministry of Rural Develop- ment and Food (Greece)	Genaissance will provide high-throughput sample handling and genotyping services	The work under a deal with Antisel A. Selidis Bros. SA is for establishing a breed- ing program in sheep that confers resist- ance to scrapie (8/11)
Genaissance Pharmaceuticals Inc. (GNSC)	Monsanto Co. and the Agricultural Research Service	Collaboration to develop technology for more accurate and efficient soybean breeding	The firms and the USDA's ARS will map the genome of the soybean and make the data publicly available; terms of the deal were not disclosed (3/9)
Genaissance Pharmaceuticals Inc. (GNSC)	Sygen International plc (UK)	Collaboration under which Genaissance will use its high-throughput genotyping capabilities	The focus is to accelerate Sygen's genet- ic discoveries in three meat animal species; terms of the deal were not disclosed (12/2/04)

Biotech Co.* (Country; Symbol)	Agbiotech Partner/Institution	Type/Product Area	Terms/Details (Date)
GangaGen Life Sciences Inc.* (Canada)	Elanco Animal Health (unit of Eli Lilly and Co.)	Deal to jointly develop and sell phage-based products for the control of dangerous bacteria	A goal of the project is to eliminate patho- genic E. coli in cattle before the animal is processed for food; terms of the deal were not disclosed (9/14)
Genedata AG* (Switzerland)	Bayer CropScience (unit of Bayer AG)	They extended for three years a collaboration in agrochemical research	The deal includes licenses for the AgroLead edition of Genedata Phylosopher as well as for Genedata Expressionist technology (6/9)
GeoPharma Inc. (GORX)	Dechra Pharmaceuticals plc (UK)	Worldwide marketing deal on GeoPharma's levothyroxine liquid and tablets for animal health applications	GeoPharma subsidiary Belcher Pharmaceuti- cals gets a \$500,000 up-front payment; they will equally share profits from the product, which is used to treat hypothy- roidism in dogs (2/17)
Icoria Inc. (ICOR)	Monsanto Co.	Monsanto acquired Icoria assets related to the field of transgenic traits for agriculture applications	Icoria gets \$6.75M in cash, undisclosed installment and milestone payments, plus additional considerations; the companies have been researching the area for six years under an existing deal; a number of Icoria employees will join Monsanto (3/24)
Icoria Inc. (ICOR)	DuPont Crop Protection	Icoria will screen a DuPont chemical library to identify compounds that improve crop productivity	The goal is to increase nutrient uptake and tolerance to environmental stress; Icoria gets an undisclosed up-front pay- ment and potential milestone and royalty payments (2/1)
IDEXX Laboratories Inc. (IDXX)	European Commission	The company's HerdChek test for postmortem detection of bovine spongiform enceph- alopathy was approved in Europe	The EIA test uses Seprion ligand technology from Microsens Biotechnologies Ltd.; app- rovals in individual countries were expect- ed to follow (2/18)
iDiverse Inc.*	University of Nebraska at Lincoln	iDiverse licensed exclusive rights to UNL's transgenic plant technology; they also agreed to collaborate on development	The technology may provide plants with resistance to a range of diseases and envi- ronmental stresses; terms of the deal were not disclosed (7/20)
ImmuCell Corp. (ICCC)	Pfizer Animal Health	Development and marketing deal for Mast Out, a Nisin- based treatment for mastitis in lactating dairy cows	ImmuCell gets an up-front payment along with potential milestone and royalty pay- ments; Pfizer gains exclusive worldwide rights (12/21/04)
Large Scale Biology Corp. (LSBC)	Growers Research Group LLC	GRG licensed rights to use LSBC's Geneware plant gene expression technology	GRG, a company whose members are a con- sortium of California agribusiness con- cerns, plans to discover new approaches to crop protection under the exclusive, worldwide research license; it also has an option to gain commercial rights (11/22)

Biotech Co.* (Country; Symbol)	Agbiotech Partner/Institution	Type/Product Area	Terms/Details (Date)
Lynx Therapeutics Inc. (merged with Solexa Ltd.; UK; SLXA)	U.S. Department of Agriculture	Lynx's Massively Parallel Signature Sequencing technology will be used in a project focused on small RNAs in rice	University of Delaware faculty members got a grant for the work from the USDA; resulting data will be made publicly avail- able (2/24)
Lynx Therapeutics Inc. (merged with Solexa Ltd.; UK; SLXA)	National Science Foundation	Lynx will provide genome- wide transcriptome sequencing services on oyster samples	The work is being done under a research grant the NSF awarded to University of Southern California researchers for work on genetics and physiology of oysters (1/31)
Meridian Bioscience Inc. (VIVO)	Synbiotics Corp.	Deal under which Synbiotics will distribute the veterinary products of Meridian subsidiary Viral Antigens Inc.	Synbiotics immediately began marketing VAI's line of pseudorabies virus antibody test kits; they intend to explore additional veteri- nary diagnostic product opportunities (3/16)
MerLion Pharmaceuticals Pte. Ltd.* (Singapore)	Dow AgroSciences LLC	Collaboration to identify candidates for new agrochemical agents	MerLion brings its collection of natural product samples, natural product chem- istry and bioprocessing expertise to the collaboration, terms of which were not dis- closed (3/17)
Modular Genetics Inc.*	Monsanto Co.	Three-year deal under which Monsanto gained an exclusive license to use MGI's protein optimization platform in agricultural applications	The deal includes the establishment of a research facility in Cambridge, Mass., where business and research headquarters will be relocated; terms of the deal were not disclosed (3/14)
Orion Genomics*	U.S. Department of Agriculture	Orion and North Carolina State University were awarded a two-year, \$1.59M grant	The project is to determine the gene seq- uence of parasitic nematode worms that cause human disease and destruction of crops; resulting data will be released to the public (12/8/04)
ParAllele BioScience (acquired by Affymetrix Inc.; AFFX)	Dairy Cooperative Research Centre (Australia)	Collaboration to screen the DNA of more than 1,500 elite Australian dairy bulls	Technology from ParAllele and Affymetrix will be used for a high-density genome- wide scan; terms of the deal were not dis- closed (11/9)
PRB Pharmaceuticals Inc.* and Lee's Pharmaceuticals Holdings Ltd. (Hong Kong)	Vietnam Department of Animal Health	Vietnam officials will test an animal version of PRB's antiviral product on their poultry flocks	The effort is part of a multinational avian influenza research collaboration that includes institutions in Hong Kong, China and Thailand (7/8)
PR Pharmaceuticals Inc.*	Merial Ltd. (joint venture of Merck and Co. Inc. and Sanofi-Aventis Group)	Collaboration to develop animal health products using PRP's sustained-release formulation and manufacturing technologies	Merial has exclusive rights to resulting products; terms were not disclosed; Merial already distributes PRP's DuraLease prod- uct to the North American beef industry (3/16)

Biotech Co.* (Country; Symbol)	Agbiotech Partner/Institution	Type/Product Area	Terms/Details (Date)
Sequenom Inc. (SQNM)	MetaMorphix Inc.*	MMI will use use Sequenom's MassARRAY technology in field trials of DNA-based animal predictive diagnostic tools	The deal supports an agreement MMI has with Cargill Inc.; the effort with Sequenom focuses on DNA screening and selection in livestock and companion animals (11/7)
Sangamo BioSciences Inc. (SGMO)	Dow AgroSciences LLC	Dow got rights to access Sangamo's zinc finger DNA- binding protein technology for use in plants and plant cell cultures	The deal is exclusive in plant agriculture and industrial products, and nonexclusive in animal health and biopharmaceutical products produced in plants; Sangamo could get \$27.5M in the first three years of the deal and up to \$53M overall, plus mile- stone and royalty payments (10/5)
Scynexis Inc.*	Merial Ltd. (joint venture of Merck and Co. Inc. and Sanofi-Aventis Group)	Collaboration under which Scynexis will be the primary animal health discovery research partner for Merial	The agreement could run up to 15 years and be worth up to \$150M for Scynexis, which also could get milestone payments and sales royalties in the deal (9/29)
Sygen International plc (UK; LSE:SNI)	Genus plc (UK; AIM:GNS)	They reached an agreement under which Genus would acquire Sygen for £187M (US\$322M) in cash	Sygen applies quantitative genetics and biotechnology to animal breeding; Genus focuses on bovine genetics (10/28)
Xpention Genetics Inc.*	University of Texas M.D. Anderson Cancer Center	Xpention got exclusive rights to technology for detecting cancer based on the p65 tumor marker	Xpention initially plans to use the technol- ogy to develop an immunological test for detecting cancer in canines; the technology also has applicability in humans; Xpention would pay royalties on resulting sales (4/27)
Vical Inc. (VICL)	Aqua Health Ltd. (Canada; affiliate of Novartis Animal Health)	Aqua Health got approval in Canada to market a vaccine for farm-raised salmon	The APEX-IHN vaccine, based on Vical's plasmid DNA delivery technology, was approved for use against infectious hematopoietic necrosis virus (7/19)

Notes:

This chart contains information on new and revised corporate agreements, as well as other actions, involving agricultural or animal biotechnology.

* Private companies are indicated with an asterisk.

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		11/18	11/23	WK	YTD				11/18	11/23	WK	YTD	
Astrom Biosci	ASTM	2.16	2.07	-4.17%	52.11%	2210	Dendreon	DNDN	5.99	6.18	3.17%	-44.43%	1875
Abgenix	ABGX	13.59	13.36	-1.69%	31.43%	3747	DepoMed	DEPO	5.22	5.23	0.19%	-3.33%	747
Acadia	ACAD	9.49	9.35	-1.48%	40.18%	70	Digene	DIGE	27.98	27.99	0.04%	7.00%	546
Accelrys Inc	ACCL	7.97	8.27	3.76%	2.18%	789	Discovery Labs	DSCO	7.1	7	-1.41%	-10.47%	1180
Access Pharma	AKC	0.76	0.66	-13.16%	-78.53%	112	Discovery Partners	DPPI	2.68	2.69	0.37%	-43.10%	230
Acusphere	ACUS	4.85	5	3.09%	-20.88%	337	Diversa	DVSA	5.12	5.26	2.73%	-41.42%	418
Adolor	ADLR	13.62	15.36	12.78%	37.30%	2616	DOR BioPharma	DOR	0.3	0.3	0.00%	-53.13%	235
Advancis	AVNC	1.28	1.32	3.13%	-66.49%	125	DOV Pharma	DOVP	15.14	15.11	-0.20%	-16.12%	387
Aeolus	AOLS	1.05	1.1	4.76%	-16.00%	194	Draxis Health	DRAX	4.65	4.11	-11.61%	-6.25%	1030
AEterna	AEZS	4.15	4.45	7.23%	-33.71%	208	Durect	DRRX	5.21	5.07	-2.69%	58.84%	915
Affymetrix	AFFX	49.58	51.85	4.58%	35.65%	2665	DUSA Pharma	DUSA	9.81	9.88	0.71%	-31.40%	374
Albany Molecular	AMRI	12.29	12.31	0.16%	10.32%	493	Dyax	DYAX	4.26	4.41	3.52%	-41.00%	1032
Alexion Pharma	ALXN	28.26	21.53	-23.81%	12.14%	16841	Dynavax	DVAX	4.85	4.58	-5.57%	-39.38%	144
Alkermes	ALKS	18.51	19.15	3.46%	31.37%	2932	Embrex	EMBX	13	13.1	0.77%	-1.96%	24
Alliance	ALLP	0.1	0.12	20.00%	-47.37%	83	Emisphere	EMIS	4.68	4.79	2.35%	16.42%	90
Allos	ALTH	2.09	2.15	2.87%	-12.92%	113	Encysive Pharma	ENCY	10.65	11.21	5.26%	7.25%	1433
Alnylam	ALNY	11.55	12.94	12.03%	54.62%	876	EntreMed	ENMD	2.23	2.22	-0.45%	-31.17%	665
Alteon	ALT	0.22	0.22	0.00%	-83.21%	494	Enzo Biochem	ENZ	13.48	14.1	4.60%	-30.77%	445
Amgen	AMGN	83.22	82.82	-0.48%	29.73%	16636	Enzon	ENZN	6.85	6.97	1.75%	-50.07%	840
Amylin	AMLN	36.59	38.61	5.52%	56.64%	6586	Epix Pharma	EPIX	5.74	5.18	-9.76%	-67.95%	1870
Anadys	ANDS	10.7	10.71	0.09%	42.86%	230	Ergo Science	ERGO	0.88	0.87	-1.14%	-63.93%	92
Antigenics	AGEN	5.01	5.76	14.97%	-50.49%	1252	Exact Sciences	EXAS	1.64	1.56	-4.88%	-41.00%	186
Aphton	APHT	0.421	0.39	-7.36%	-86.46%	393	eXegenics	EXEG	0.4	0.45	12.50%	17.65%	108
Aradigm	ARDM	0.85	0.85	0.00%	-50.87%	820	EXELIX	EXEL	8.65	8.5	-1.73%	-8.95%	975
Arena	ARNA	10.63	10.99	3.39%	58.66%	1217	Favril	FVRL	3.25	3.39	4.31%	-53.57%	109
Ariad Pharma	ARIA	6.17	6.26	1.46%	-16.96%	1669	Flamel Tech	FLML	19.1	19.55	2.36%	-2.00%	483
ArQule	ARQL	6.86	6.74	-1.75%	18.48%	230	Geniera	GENR	1.51	1.43	-5.30%	-55.85%	812
Array	ARRY	7.01	7.07	0.86%	-26.37%	370	Gene Logic	GLGC	3.87	3.68	-4.91%	5.16%	338
Aspreva	ASPV	11.43	13	13.74%	3.91%	278	Genelabs	GNLB	0.455	0.48	5.49%	-62.08%	8525
Atherogenics	AGIX	15.22	15.99	5.06%	-35.40%	1578	Genentech	DNA	96.96	98.15	1.23%	78.10%	7799
Autolimmune	AIMM	0.92	0.97	5.43%	4.55%	8	Genexx Biotech	GNBT	0.97	0.87	-10.31%	29.33%	5207
Auxilium	AUXL	4.65	4.94	6.24%	-47.46%	146	Genitope	GTOP	7.96	8.33	4.65%	-53.29%	590
Avanir	AVN	3	2.92	-2.67%	-12.02%	546	Gen-Probe	GPRO	45.78	45.53	-0.55%	1.26%	980
Avant Immuno	AVAN	1.85	1.64	-11.35%	-7.96%	1096	Genta	GNTA	1.42	1.39	-2.11%	-19.32%	3868
Avax Technol	AVXT	0.3	0.28	-6.67%	-3.23%	69	GenVec	GNVC	1.61	1.75	8.70%	-1.23%	625
AVI BioPharma	AVII	3.46	3.3	-4.62%	47.23%	2639	Genzyme	GENZ	77.12	75.15	-2.55%	32.81%	4996
Avigen	AVGN	3.05	3.1	1.64%	-6.44%	74	Geron	GERN	9.19	9.18	-0.11%	15.31%	1314
Axonyx	AXYX	0.81	0.81	0.00%	-86.94%	813	Gilead Sciences	GILD	54.36	53.79	-1.05%	55.36%	9789
BioCryst	BCRX	12.16	11.98	-1.48%	110.38%	2017	GPC Biotech	GPCB	10.75	11.19	4.09%	-24.35%	9
Biogen IDEC	BIIB	45.33	44.82	-1.13%	-31.95%	8595	GTC Biothera	GTCB	1.91	1.85	-3.14%	25.66%	870
BioMarin	BMRN	9.89	9.98	0.91%	54.77%	1281	GTX	GTIX	7.8	7.87	0.90%	-42.18%	347
Biomira	BIOM	1.7	1.56	-8.24%	-29.46%	2232	Hana Bioscience	HBX	5.45	5.94	8.99%	186.84%	238
Biopure	BPUR	0.89	0.93	4.49%	50.85%	217	Helix Biomed	HXBM	0.85	0.85	0.00%	-51.43%	15
Biotime	BTIM	0.28	0.25	-10.71%	-81.46%	103	Hemispherx	HEB	2.8	2.31	-17.50%	-76.71%	2311
Boston Life	BLSI	2.0685	2.03	-1.86%	-27.42%	34	Human Genome Sci	HGSI	9.57	9.37	-2.09%	62.20%	7288
Braker BioSciences	BRKR	4.85	4.94	1.86%	20.35%	159	icagen	ICGN	6	6.06	1.00%	-25.00%	38
CancerVax	CNVX	1.51	1.41	-6.62%	-86.08%	93	icoria	ICOR	0.25	0.25	0.00%	-61.54%	651
Cardiovas Biother	CVBT	5.2	5.5	5.77%	-48.00%	28	ICOS	ICOS	28.42	29.17	2.64%	0.50%	2246
Carrington	CARN	3.63	3.75	3.31%	-40.78%	140	Idenix	IDIX	22.56	21.86	-3.10%	31.55%	401
Celera	CRA	12.33	12.43	0.81%	-10.33%	980	Idexx Labs	IDXX	71.95	73.15	1.67%	31.80%	372
Celgene	CELG	61.75	62.78	1.67%	132.84%	4165	ImClone Sys	IMCL	32.08	33.02	2.93%	-30.38%	3384
Cell Genesys	CEGE	5.86	5.92	1.02%	-27.65%	1059	Immtech	IMM	7.87	8.02	1.91%	-34.36%	109
Cell Therapeu	CTIC	2.27	2.3	1.32%	-72.11%	1204	Immucell	ICCC	4.86	5	2.88%	-32.12%	20
Cellegy Pharma	CLGY	0.71	0.72	1.41%	-75.26%	872	Immucor	BLUDE	23.5	22.01	-6.34%	-0.04%	1762
Cel-Sci	CVM	0.5	0.52	4.00%	-16.67%	384	Immune Resp	IMNR	0.19	0.24	26.32%	-88.20%	4761
Cephalon	CEPH	49.61	51.65	4.11%	-2.50%	4398	Immunicon	IMMC	3.96	4.22	6.57%	-43.27%	349
Cepheid	CPHD	10.1	10.91	9.10%	0.60%	1612	ImmunoGen	IMGN	5.87	5.99	2.04%	-33.60%	580
Cerus Corp.	CERS	7.27	8.4	15.54%	146.44%	737	ImmunoMedics	IMMU	1.85	2.14	15.68%	-39.14%	1717
Chiron	CHIR	44.35	44.54	0.43%	33.06%	3514	Incyte Genomics	INCY	4.8	6	25.00%	-51.95%	16374
Cholestech	CTEC	8.75	9.33	6.63%	6.71%	298	IDEV	IDEV	4.42	4.24	-4.07%	-25.84%	779
Ciphergen	CIPH	1.28	1.73	35.16%	-70.23%	343	Inhibitex	INHX	9.71	9.49	-2.27%	20.77%	203
CollaGenex	CGPI	9.18	9.54	3.92%	25.07%	332	INO	INO	2.2	2.16	-1.82%	-44.16%	76
Columbia Labs	CBRX	3.65	3.9	6.85%	37.74%	126	InSite Vision	ISV	0.76	0.78	2.63%	-13.64%	944
CombiMatrix	CBMX	1.77	1.75	-1.13%	-55.42%	1112	Insmed	INSM	1.17	1.3	11.11%	-46.82%	1519
Compugen	CGEN	2.72	2.78	2.21%	-47.18%	138	Inspire Pharma	ISPH	6.47	6.22	-3.86%	-61.42%	1611
Connetics Corp.	CNCT	13.2	13.2	0.00%	-45.66%	2417	Integra LifeSci	IART	35.5	36.07	1.61%	-3.87%	660
Corautus Genetics	VEGF	4.25	4.07	-4.24%	-21.00%	71	Interleukin	ILGN	4.05	3.9	-3.70%	14.08%	164
Corcept	CORT	4.75	4.49	-5.47%	-24.00%	87	InterMune	ITMN	15.84	15.97	0.82%	19.46%	1034
Corgentech	CGTK	2.26	2.29	1.33%	-72.71%	338	IntraBiotech	IBPI	3.6	3.75	4.17%	-11.76%	0
Cortex	COR	2.18	2.39	9.63%	-19.56%	232	Introgen	INGN	6.18	6.18	0.00%	-26.78%	263
CoTherix	CTRX	13.84	12.81	-7.44%	16.11%	281	Invitrogen	IVGN	65.19	63.78	-2.16%	-2.89%	2841
Critical Thera	CRTX	6.41	6.7	4.52%	-19.88%	314	Isis Pharma	ISIS	4.98	5.1	2.41%	-15.59%	674
Crucell	CRXL	25.35	27.11	6.94%	84.10%	1983	Ista Pharma	ISTA	7.16	6.98	-2.51%	-29.25%	158
Cubist Pharma	CBST	22.7	22.48	-0.97%	91.89%	2021	Keryx	KERX	14.9	14.57	-2.21%	28.78%	553
CuraGen	CRGN	4.64	4.47	-3.66%	-35.20%	589	Kosan	KOSN	7	7.27	3.86%	1.01%	817
Curis	CRIS	4.17	4.11	-1.44%	-20.11%	423	La Jolla Pharma	LJPC	0.72	0.65	-9.72%	-56.89%	819
CV Therapeutics	CVTX	25.88	26.08	0.77%	12.52%	1521	Large Scale	LSBC	0.26	0.36	38.46%	-79.37%	672
Cyanotech	CYAN	0.666	0.64	-3.90%	-53.75%	96	Lexicon	LEXG	4.1	3.91	-4.63%	-47.16%	357
Cygnus	CYGN	0.153	0.15	-1.96%	27.50%	281	LifeCell	LIFC	20	19.64	-1.80%	95.69%	1008
Cypress	CYPB	5.82	5.7	-2.06%	-58.61%	952	Lifecore Bio	LCBM	14.09	14	-0.64%	25.13%	39
Cytogen	CYTO	3	3.05	1.67%	-73.96%	337	Ligand	LGND	9.6	10.4	8.33%	-17.53%	6450
Cytokinetics	CYTK	8.8	8.78	-0.23%	-14.15%	95	MacroChem	MCHM	0.03	0.03	0.00%	-95.89%	741
CytRx	CYTR	0.93	0.96	3.23%	-33.57%	605	Manhattan Pharma	MHA	1.25	1.16	-7.20%	28.87%	1399
DeCode	DCGN	9.79	9.55	-2.45%	25.35%	842	MannKind	MNKD	12.11	12.34	1.90%	-23.11%	241
DeltaGen	DGENQ	0.34	0.31	-8.82%	385.71%	205	Martek Bio	MATK	26.37	27.08	2.69%	-48.50%	241

Company	Symbol	Close 11/18	Close 11/23	%Change WK	%Change YTD	Vol (000)	Company	Symbol	Close 11/18	Close 11/23	%Change WK	%Change YTD	Vol (000)
Matritech	MZT	0.64	0.62	-3.13%	-39.62%	81	Trimeris	TRMS	12.93	12.96	0.23%	-8.75%	104
Maxim Pharma	MAXM	1.22	1.27	4.10%	-59.60%	81	Trinity Bio	TRIB	7.97	8.05	1.00%	169.26%	34
Maxygen	MXYG	7.88	7.73	-1.90%	-38.39%	1874	Triplos	TRPS	3.16	3	-5.06%	-40.71%	2977
Medarex	MEDX	10.25	10.3	0.49%	-4.92%	3576	Unigene	UGNE	3.49	3.42	-2.01%	55.11%	647
Medimmune	MEDI	36.25	36.49	0.66%	33.71%	804	United Thera	UTHR	73.91	74.18	0.37%	63.70%	132
Memory	MEMY	2	2.02	1.00%	-62.41%	53	Valentis	VLTS	2.16	2.17	0.46%	-13.60%	0
Metabasis	MBRX	6.34	6.13	-3.31%	-12.55%	1382	VaxGen	VXGN	8.95	8.95	0.00%	-47.35%	344
MGI Pharma	MOGN	21.07	21.2	0.62%	-24.78%	317	Vernalis	VNLS	2.15	2.15	0.00%	-32.81%	582
Millennium	MLNM	10.5	10.92	4.00%	-13.51%	0	Vertex Pharma	VRTX	26.82	26.26	-2.09%	153.74%	4864
Miravant	MRVT	0.27	0.29	7.41%	-73.27%	818	ViaCell	VIAC	6.2	6.02	-2.90%	-11.43%	516
Momenta	MNTA	21.61	23.09	6.85%	206.09%	961	Vical	VICL	5.48	5.42	-1.09%	16.60%	1376
Monogram Biosci	MGRM	2.01	1.95	-2.99%	175.34%	818	Vion Pharma	VION	1.98	1.86	-6.06%	-57.78%	16081
Myogen	MYOG	20.89	21.8	4.36%	158.86%	5654	Viragen	VRA	0.65	0.51	-21.54%	-35.00%	16081
Myriad Genetics	MYGN	19.39	19.93	2.78%	-13.86%	1018	ViroPharma	VPHM	17.4	17.7	1.72%	435.38%	0
NABI	NABI	3.29	3.21	-2.43%	-77.54%	387	VioQuest	VQPH	0.9	1.02	13.33%	12.50%	133
Nanogen	NGEN	3.02	2.99	-0.99%	-58.97%	3840	Xcyte Therapies	XCYT	0.29	0.31	6.90%	-89.49%	400
Nastech	NSTK	13.96	14.36	2.87%	15.37%	448	Xenogen	XGEN	2.41	2.69	11.62%	-65.57%	149
Nektar Thera	NKTR	16.16	17.39	7.61%	-20.16%	150	XenoPort	XNPT	13.92	13.36	-4.02%	32.57%	19
NeoPharm	NEOL	10.12	9.8	-3.16%	-19.10%	587	XOMA	XOMA	1.48	1.68	13.51%	-42.86%	2996
NeoRx Corp.	NERX	1.05	1.01	-3.81%	-49.76%	102	Zonagen	ZONA	4.8	5.06	5.42%	10.85%	114
Neose Technol	NTEC	1.83	1.88	2.73%	-72.77%	191	ZymoGenetics	ZGEN	17.44	17.89	2.58%	-24.17%	396
Neurobio Tech	NTIL	3.9	3.88	-0.51%	-11.76%	1465							
Neurochem	NRMX	14.66	14.68	0.14%	-16.37%	60							
Neurocrine Biosci	NBIX	59.67	62.02	3.94%	21.03%	297							
Neurogen	NRGN	7.51	7.72	2.80%	-19.76%	3349							
New River	NRPH	53.7	49.79	-7.28%	258.96%	201							
NitroMed	NTMD	18.1	16.04	-11.38%	-32.08%	518							
North Amer Scien	NASI	2.39	2.38	-0.42%	-55.66%	98							
Northfield Labs	NFLD	12.92	12.63	-2.24%	-42.71%	10266							
Northwest BioThera	NWBT	0.14	0.14	0.00%	250.00%	1586							
Novavax	NVAX	3.24	3.12	-3.70%	-0.61%	712							
NPS Pharma	NPSF	11.36	11.72	3.17%	-37.86%	2069							
Nuvelo	NUVO	8.6	9	4.65%	-12.69%	3207							
Onyx Pharma	ONXX	26.1	26.53	1.65%	-19.42%	281							
OraSure Tech	OSUR	11.11	12.31	10.80%	65.33%	236							
Orchid	ORCH	6.45	6.85	6.20%	-43.91%	1230							
Ortec Int'l	ORTN	0.24	0.25	4.17%	-75.26%	2746							
Oscient Pharma	OSCI	2.1	1.98	-5.71%	-42.47%	202							
OSI Pharma	OSIP	23.72	24.95	5.19%	-68.31%	127							
Osteotech	OSTE	3.32	3.29	-0.90%	-39.64%	67							
OXIGENE	OXGN	5.26	5.17	-1.71%	-4.36%	3946							
Oxis Int'l	OXIS	0.29	0.25	-13.79%	-47.27%	5826							
Pain Therapeu	PTIE	8.43	7.31	-13.29%	16.92%	3605							
Palatin Tech	PTN	2.44	3.2	31.15%	-8.27%	477							
Peregrine Pharma	PPHM	0.97	0.93	-4.12%	-17.09%	155							
Pharma Prod Devlp	PPDI	60.69	60.99	0.49%	46.98%	854							
Pharmacopeia	PCOP	3.13	2.56	-2.56%	-47.57%	1743							
Pharmacyclics	PCYC	7.86	7.73	-1.65%	-24.93%	101							
Pharmion	PHRM	17.32	17.32	0.00%	-58.97%	22							
Pharmos	PARS	2.08	2.03	-2.40%	46.48%	2068							
Pharsight	PHST	1.55	1.48	-4.52%	63.16%	397							
Pracis	PRCS	3.98	0.76	-80.90%	109.47%	3956							
Progenics Pharma	PGNX	26.65	26.31	-1.28%	55.30%	2891							
Protein Design	PDLI	27.8	28.67	3.13%	34.56%	754							
QLT PhotoTher	QLTI	6.7	6.75	-0.74%	-57.71%	176							
Questcor Pharma	QSC	0.9	0.86	-4.44%	69.81%	833							
Regeneration	RTIX	8.17	8.31	1.71%	-22.04%	1036							
Regeneron	REGN	11.23	11.36	1.16%	21.93%	186							
Renovis	RNVS	16.07	16.27	1.24%	11.75%	1615							
Repligen	RGEN	3.1	3	-3.23%	7.64%	787							
Rigel	RIGL	23.65	22.39	-5.33%	-3.15%	172							
Salix	SLXP	19.45	19.59	0.72%	154.58%	796							
Sangamo	SGMO	4.05	3.9	-3.70%	-32.50%	796							
Sanarus	SNTS	6.5	6.22	-4.31%	-28.10%	752							
Savant Pharma	SVNTE	3.6	3.52	-2.22%	32.84%	154							
SciClone	SCLN	3.92	4.25	8.42%	5.95%	486							
Seattle Genetics	SGEN	5.44	5.35	-1.65%	-16.69%	6482							
Senomyx	SNMX	13.88	13.63	-1.80%	67.63%	269							
Sepracor	SEPR	57.25	59.15	3.32%	-3.57%	564							
Sequenom	SQNM	0.88	0.89	1.14%	-38.89%	114							
Serono	SRA	18.06	18.87	4.49%	10.66%	3							
Siga Technol	SIGA	0.99	1.02	3.03%	-40.36%	1308							
Simulations Plus	SLP	3.6	3.57	-0.83%	-35.25%	157							
Sirna Thera	RNAI	3.63	3.5	-3.58%	14.51%	157							
Solexa	SLXA	8.9	7.9	-11.24%	-49.40%	2338							
Sonus Pharma	SNUS	4.7	4.66	-0.85%	33.14%	2338							
Spectrum	SPPI	3.91	4.05	3.58%	-41.29%	84							
StemCells	STEM	4.57	4.43	-3.06%	8.04%	838							
Stratagene	STGN	10.05	10.2	1.49%	29.68%	822							
SuperGen	SUPG	5.78	5.7	-1.38%	-18.01%	205							
Tanox	TNOX	15.74	16.4	4.19%	3.55%	563							
Tapestry Pharma	TPPH	0.3	0.32	6.67%	-69.07%	0							
Targeted Genetics	TGEN	0.49	0.5	2.04%	-68.39%	184							
Telik	TELK	18.28	17.84	-2.41%	-4.49%	713							
Tercica	TRCA	9.82	9.3	-5.30%	-1.80%	713							
Theravance	THRX	21.25	21	-1.18%	18.72%	316							
Third Wave Tech	TWTI	2.83	3.15	11.31%	-67.09%	316							
Threshold Pharma	THLD	13.47	14.07	4.45%	92.43%	160							
Titan Pharma	TTP	1.38	1.36	-1.45%	-57.14%	510							
Transgenomic	TBIO	0.94	0.89	-5.32%	-18.26%	104							

LONDON STOCK EXCHANGE

Company	Symbol	11/18	11/23	%WK	%YTD	Volume
Acambis	ACM	209		-100.00%	-16.90%	1057
Antisoma	ASM	22.25		-100.00%	36.92%	640
Ark Therapeutics	AKT	107.75		-100.00%	26.76%	72
Cambridge Antibody	CAT	632.5		-100.00%	-12.27%	499
Oxford Biomedica	OXB	27.75		-100.00%	58.57%	12237
Pharmagene	PGN	23.4		-100.00%	-24.52%	0
Phytopharm	PYM	78.5		-100.00%	-66.60%	1531
Protherics	PTI	54.5		-100.00%	-17.11%	1506
Provalis	PRO	1.36		-100.00%	-84.22%	12663
SkyePharma	SKP	51		-100.00%	-21.54%	67183
Vernalis Group plc	VER	63.25		-100.00%	-28.53%	1448

Note: Prices are denoted in pence.

TORONTO STOCK EXCHANGE

Company	Symbol	11/18	11/23	%WK	%YTD	Volume
Adherex	AHX	1.12	1.1	-1.79%	166.67%	64
Allon Therapeutics	NPC	0.85	0.85	0.00%	0.00%	30
Angiotech Pharma	ANP	17.54	18.2	3.76%	-21.06%	1828
Anormed	AOM	4.1	4	-2.44%	-27.43%	265
BioMS	MS	2.75	2.75	0.00%	-17.91%	48
Bioniche	BNC	0.75	0.78	4.00%	-54.82%	114
Cangene	CNJ	8.95	9.41	5.14%	-19.73%	138
Cardiome	COM	9.87	9.99	1.22%	8.58%	230
Chromos Molec	CHR	0.21	0.2	-4.76%	-66.13%	42
ConjuChem	CJC	1.03	1.02	-0.97%	-75.48%	633
Ecopia	EIA	0.405	0.41	1.23%	-61.43%	200
Hemosol	HML	0.38	0.29	-23.68%	-62.38%	199
IBEX	IBT	0.2	0.19	-5.00%	-54.55%	154
ID Biomed	IDB	34.6	34.58	-0.06%	93.19%	1781
Inex	IEX	0.185	0.16	-13.51%	-78.98%	320
Inflazyme	IZP	0.13	0.1623	0.8%	-40.91%	950
Lorus	LOR	0.285	0.28	-1.75%	-59.86%	594
Medicure	MPH	1.2	1.17	-2.50%	33.33%	1035
Neurochem	NRM	17.5	17.14	-2.06%	-17.57%	65
Oncolytics	ONC	5.16	4.61	-10.66%	-7.03%	266
Resverlogix	RSV	7.1	6.95	-2.11%	54.35%	70
Stressgen Biotech	SSB	0.41	0.39	-4.88%	-2.38%	724
Theratechnologies	TH	1.01	0.97	-3.96%	-51.90%	96
YM Bioscience	YM	3.5	3.56	1.71%	-1.69%	43

Note: Prices are denoted in Canadian dollars.

NOTES: Trading volumes for Nasdaq, Amex and NYSE are recorded as the total number of shares traded (in thousands) on a weekly basis (cumulative Monday through Friday); the weekly and YTD % changes are from IPO completion, where applicable. BioWorld's offices were closed Nov. 24 and Nov. 25.

Average Percent Change Week: +63%
 Range: -80.90% to +38.46%; Number Of Companies: 281
 (does not include LSE or TSE; not market weighted)

Average Percent Change YTD: -3.10%
 Range: -95.89% to +435.38%; Number Of Companies: 281
 (does not include LSE or TSE; not market weighted))